REMARKS/ARGUMENTS

Claims 1, 5 and 7 are pending in this application. By this amendment, Applicant cancels claims 2-4, 6 and 8-17 and amends claims 1, 5 and 7.

Claims 1-9 were objected to for containing minor informalities. Applicant has amended claim 1 to correct the minor informalities noted by the Examiner and has canceled claim 9. Accordingly, Applicant respectfully requests reconsideration and withdrawal of this objection.

Claims 1, 2 and 7-9 were rejected under 35 U.S.C. §102(b) as being anticipated by Funk et al. (U.S. 5,996,409). Claims 1, 2, 8 and 9 were rejected under 35 U.S.C. § 102(b) as being anticipated by Saito (JP 10-239064). Claims 3-6 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Funk et al. or Saito in view of Masahiro et al. (JP 8-032090). Applicant has canceled claims 2-4, 6, 8 and 9. Applicant respectfully traverses the rejections of claims 1, 5 and 7.

Claim 1 has been amended to recite:

> "A composite sensor device including an angular velocity sensor and an acceleration sensor comprising:
> a substrate;
> a displacement portion forming member disposed on the substrate, the displacement portion forming member including a vibrator for an angular velocity sensor, to be vibrated and displaced by a Coriolis force caused by an angular velocity and a movable member for an acceleration sensor, to be movably displaced by application of an acceleration, the vibrator and the movable member being spaced from each other; and
> a lid disposed on an upper side of the displacement portion forming member to cover and be spaced from the vibrator of the angular velocity sensor and the movable member of the acceleration sensor; wherein
> the substrate, the displacement portion forming member and the lid, define a space for accommodating and sealing the vibrator of the angular velocity sensor and the movable member of the acceleration sensor, in such a manner that the vibrator and the movable member can be vibrated, the space being sectioned into an angular velocity sensor space for accommodating and sealing the vibrator of the angular velocity sensor and an acceleration sensor space for accommodating and sealing the movable member of the acceleration sensor which is not communicated with the angular velocity sensor space;

> **the angular velocity sensor space is sealed in a vacuum state in which the vibrator of the angular velocity sensor can be vibrated at a high frequency in the kHz range or greater and at an amplitude that is greater than a desired value;**
>
> **the acceleration sensor space is sealed in an atmospheric pressure state for preventing high-frequency vibrations in which the movable member of the acceleration sensor can be vibrated at a low frequency of 100 Hz or less, and the movable member of the acceleration sensor is prevented from vibrating at a high frequency in the kHz range or greater and at an amplitude that is greater than the desired value even when vibrations of the vibrator of the angular velocity sensor are transmitted to the movable member of the acceleration sensor;**
>
> **the angular velocity sensor and the acceleration sensor have constant potential sites so that the sensors are maintained at set constant potentials, respectively, said constant potential site of the angular velocity sensor being electrically connected to the constant potential site of the acceleration sensor; and**
>
> **a connection electrode is arranged to connect both of the constant potential site of the angular velocity sensor and the constant potential site of the acceleration sensor to an external circuit.**" (emphasis added)

With the unique combination and arrangement of features recited in Applicant's claim 1, including the features of "the angular velocity sensor space is sealed in a vacuum state in which the vibrator of the angular velocity sensor can be vibrated at a high frequency in the kHz range or greater and at an amplitude that is greater than a desired value," "the acceleration sensor space is sealed in an atmospheric pressure state for preventing high-frequency vibrations in which the movable member of the acceleration sensor can be vibrated at a low frequency of 100 Hz or less, and the movable member of the acceleration sensor is prevented from vibrating at a high frequency in the kHz range or greater and at an amplitude that is greater than the desired value even when vibrations of the vibrator of the angular velocity sensor are transmitted to the movable member of the acceleration sensor," "the angular velocity sensor and the acceleration sensor have constant potential sites so that the sensors are maintained at set constant potentials, respectively, said constant potential site of the

angular velocity sensor being electrically connected to the constant potential site of the acceleration sensor" and "a connection electrode is arranged to both of the constant potential site of the angular velocity sensor and the constant potential site of the acceleration sensor to an external circuit," Applicant has been able to provide a composite sensor device in which both of the detection sensitivities of the angular velocity sensor and the acceleration sensor are enhanced (see, for example, the second full paragraph on page 3 of the originally filed specification).

The Examiner alleged that each of Funk et al. and Saito teaches all of the features recited in Applicant's claim 1.

Claim 1 has been amended to recite the features of "the angular velocity sensor space is sealed in a vacuum state in which the vibrator of the angular velocity sensor can be vibrated at a high frequency in the kHz range or greater and at an amplitude that is greater than a desired value," "the acceleration sensor space is sealed in an atmospheric pressure state for preventing high-frequency vibrations in which the movable member of the acceleration sensor can be vibrated at a low frequency of 100 Hz or less, and the movable member of the acceleration sensor is prevented from vibrating at a high frequency in the kHz range or greater and at an amplitude that is greater than the desired value even when vibrations of the vibrator of the angular velocity sensor are transmitted to the movable member of the acceleration sensor," "the angular velocity sensor and the acceleration sensor have constant potential sites so that the sensors are maintained at set constant potentials, respectively, said constant potential site of the angular velocity sensor being electrically connected to the constant potential site of the acceleration sensor" and "a connection electrode is arranged to connect both of the constant potential site of the angular velocity sensor and the constant potential site of the acceleration sensor to an external circuit."

In contrast to Applicant's claim 1, each of Funk et al. and Saito teaches an angular velocity sensor space and an acceleration sensor space that are **not** sealed from one another.

In particular, Fig. 2 of Funk et al. teaches an angular velocity sensor space in which the angular velocity sensor 2 is disposed and an acceleration sensor space in which acceleration sensor 3 is disposed. The angular velocity sensor space of Funk et al. is **not** sealed from the acceleration sensor space because there is an open space between the cover 47 and the separating wall between the angular velocity sensor space and the acceleration sensor space. Therefore, the angular velocity sensor space and the acceleration sensor space are necessarily in the **same atmospheric state** because the angular velocity sensor space and the acceleration sensor space of Funk et al. are **not** sealed from one another.

Similarly, as seen in each of Figs. 2-5 of Saito, the angular velocity sensor space is **not** sealed from the acceleration sensor space because there is an open space between the angular velocity sensor space in which the angular velocity sensor 1 is disposed and the acceleration sensor space in which the acceleration sensor 2 is disposed. Therefore, the angular velocity sensor space and the acceleration sensor space of Saito are necessarily in the **same atmospheric state** because the angular velocity sensor space and the acceleration sensor space of Saito are **not** sealed from one another.

Thus, Funk et al. and Saito certainly fail to teach or suggest the features of "the angular velocity sensor space is sealed in **a vacuum state** in which the vibrator of the angular velocity sensor can be vibrated at a high frequency in the kHz range or greater and at an amplitude that is greater than a desired value" **and** "the acceleration sensor space is sealed in **an atmospheric pressure state** for preventing high-frequency vibrations in which the movable member of the acceleration sensor can be vibrated at a low frequency of 100 Hz or less, and the movable member of the acceleration sensor is prevented from vibrating at a high frequency in the kHz range or greater and at an amplitude that is greater than the desired value even when vibrations of the vibrator of the angular velocity sensor are transmitted to the movable member of the acceleration sensor" (emphasis added) as recited in Applicant's claim 1.

Furthermore, the devices of Funk et al. and Saito **cannot** be modified so as to include an angular velocity sensor space that is sealed in **a vacuum state** and an acceleration sensor space that is sealed in **an atmospheric pressure state** because neither Funk et al. nor Saito teaches or suggests that the angular velocity sensor space and the acceleration sensor space could or should be sealed from one another. In contrast, each and every embodiment of Funk et al. and Saito teaches that the angular velocity sensor space and the acceleration sensor space are **not** sealed from one another. Thus, Applicant respectfully submits that it would not have been obvious to modify any of the devices of Funk et al. and Saito so as to include an angular velocity sensor space that is sealed in a vacuum state and an acceleration sensor space that is sealed in an atmospheric state.

The Examiner alleged that each of Funk et al. and Saito teaches the features of "the angular velocity sensor and the acceleration sensor have constant potential sites so that the sensors are maintained at set constant potentials, respectively, said constant potential site of the angular velocity sensor being electrically connected to the constant potential site of the acceleration sensor" and "a connection electrode is provided for connecting both of the constant potential site of the angular velocity sensor and the constant potential site of the acceleration sensor to an external circuit" as originally recited in Applicant's claim 8 and as recited in Applicant's claim 1, as amended herein. Applicant respectfully disagrees.

The Examiner alleged that col. 4, line 6 through col. 6, line 64 of Funk et al. teaches these features. However, Funk et al. fails to teach or suggest anything at all about constant potential sites, and certainly fails to teach or suggest the features of "the angular velocity sensor and the acceleration sensor have constant potential sites so that the sensors are maintained at set constant potentials, respectively, said constant potential site of the angular velocity sensor being electrically connected to the constant potential site of the acceleration sensor" and "a connection electrode is arranged to connect both of the constant potential site of the angular velocity sensor and the

constant potential site of the acceleration sensor to an external circuit" as recited in Applicant's claim 1.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 1 under 35 U.S.C. § 102(b) as being anticipated by Funk et al. and as being anticipated by Saito.

The Examiner alleged that Masahiro et al. teaches that hollow parts around the mass bodies of an angular velocity sensor should preferably be in a vacuum sate or near vacuum state. However, for the reasons described above, contrary to the Examiner's allegations, it would **not** have been obvious to modify the devices of Funk et al. and Saito so as to include an angular velocity sensor space which is in a vacuum state because the angular velocity sensor space and the acceleration sensor space are **not** sealed from one another. Thus, if the angular velocity sensor space were provided so as to be in a vacuum state, the acceleration sensor space would necessarily also be in a vacuum state. Accordingly, Applicant respectfully submits that the combination of Funk et al. or Saito and Masahiro fails to teach or suggest the features of "the angular velocity sensor space is sealed in **a vacuum state** in which the vibrator of the angular velocity sensor can be vibrated at a high frequency in the kHz range or greater and at an amplitude that is greater than a desired value" **and** "the acceleration sensor space is sealed in **an atmospheric pressure state** for preventing high-frequency vibrations in which the movable member of the acceleration sensor can be vibrated at a low frequency of 100 Hz or less, and the movable member of the acceleration sensor is prevented from vibrating at a high frequency in the kHz range or greater and at an amplitude that is greater than the desired value even when vibrations of the vibrator of the angular velocity sensor are transmitted to the movable member of the acceleration sensor" (emphasis added) as recited in Applicant's claim 1.

Accordingly, Applicant respectfully submits that Funk et al., Saito and Masahiro, applied alone or in combination, fail to teach or suggest the unique combination and arrangement of elements recited in Applicant's claim 1.

In view of the foregoing amendments and remarks, Applicant respectfully submits

that claim 1 is allowable. Claims 5 and 7 depend upon claim 1, and are therefore allowable for at least the reasons that claim 1 is allowable.

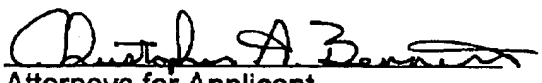
In view of the foregoing amendments and remarks, Applicant respectfully submits that this application is in condition for allowance. Favorable consideration and prompt allowance are solicited.

To the extent necessary, Applicant petitions the Commissioner for a ONE-month extension of time, extending to September 16, 2005, the period for response to the Office Action dated May 16, 2005.

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

Date: August 26, 2005



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